UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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MEMORANDUM:

SUBJECT: Terrazole: Refined Tier I Chronic Surface Water EECs for use in the Human Health Drinking Water Risk Assessment.

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This document updates, for the human health drinking water risk assessment, the chronic tier I surface water estimated environmental concentrations (EECs) from terrazole use on golf courses. Several refinements, including percent crop area and percent crop treated, were included in the GENEEC estimates. As a result of these refinements, the following chronic (56-day) concentrations of terrazole were calculated.

Treatment Site	Application Rate	Number of Applications	Application Interval	56-Day Chronic EEC
tees/greens	3.8 lbs. a.i. per acre	5	10 days	7.8 ppb
fairways	3.8 lbs. a.i. per acre	2	10 days	24.5 ppb
tees/greens/fairways	3.8 lbs. a.i. per acre	tees/greens: 5 fairways: 2	10 days	32.3 ppb
tees/greens	3.8 lbs. a.i. per acre	2	10 days	4.1 ppb

Discussion of Refinements to the GENEEC EECs

The GENEEC model was run using the standard input parameters which include application rate, application interval, persistence, solubility, mobility, etc. Then, a series of refinements were applied to the EECs. These refinements included the incorporation of an 87 percent crop area factor (default PCA) as well as the percentage of the golf course that actually receives pesticide treatment, bringing the resulting PCA factor down to 17%. It was assumed that tees and greens comprise 2.8% (5 acres) of the acreage of a golf course. When fairways are included, an additional 16.7% (30 acres) of the golf course is treated.

Input values for the GENEEC model.

Variable Name	Data Value
Application Method	ground
Application Rate (lbs. ai/acre)	3.8
Application Frequency	2 or 5
Application Interval (days)	10
Solubility	106 ppm
Hydrolysis	$T_{1/2}$ = 83 days
Photolysis	stable
Aerobic Soil Metabolism	$T_{1/2}$ = 34.2 days
Aerobic Aquatic Metabolism	not available
Koc	195